AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. Canceled).

2. (Currently Amended) Method as claimed in Claim ~~24~~ 30, wherein the thermally loaded components include the walls of the combustor and/or walls of the transition pieces and/or housing parts of the turbine and/or rotor parts of the turbine and/or blades of the turbine.

3. (Currently Amended) Method as claimed in Claim 2, wherein the blades of the turbine are cooled with the cooling air, and the drilled film cooling openings are located on the leading blade edges and/or the trailing blade edges.

4. (Withdrawn).

5. (Currently Amended) Method as claimed in Claim ~~24~~ 30, wherein the compressor of the gas turbine system itself is used for compressing the cooling air after the cooling process.

6-7. (Withdrawn).

8. (Canceled).

9. (Canceled).

10. (Currently Amended) Method as claimed in Claim ~~24~~ 30, wherein a cooler is used to cool the cooling air.

11-13. (Withdrawn).

14. (Canceled).

15. (Currently Amended) Apparatus for cooling a gas turbine system as claimed in-Claim ~~26~~ 33, wherein the cooled components include blades of the turbine, and the drilled film cooling openings are located on the leading blade edges and/or the trailing blade edges.

16. (Currently Amended) Apparatus for cooling a gas turbine system as claimed in-Claim ~~26~~ 33, wherein the second cooling lines merge into the compressor at an intermediate pressure level.

17. (Withdrawn).

18-20. (Canceled).

21. (Withdrawn).

22. (Canceled).

23. (Currently Amended) Apparatus for cooling a gas turbine system as claimed in claim ~~22~~ 33, wherein a cooler is located in the first cooling lines.

24. (Canceled).

25. (Withdrawn).

26. (Canceled).

27-29 (Withdrawn).

30. (New) A method for cooling a gas turbine system comprising a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, the method comprising:

removing compressed air from the compressor;

cooling the removed air;

feeding the cooled removed air through thermally loaded components of the combustor and/or the turbine inside an internal cooling channel;

cooling the air after it has passed the thermally loaded components;

compressing and adding the air to the compressor end air;

wherein, in the manner of a targeted leakage, a small portion of the removed air is fed for film cooling into the turbine stream through drilled cooling openings provided on the components.

31. (New) The method of claim 30, comprising:

removing more heat from the air in the cooling steps than is transferred into the air while flowing through the thermally loaded components to an extent as to

lower the temperature of the compressor end air below that without adding the removed air.

32. (New) A method for cooling a gas turbine system comprising a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, the method comprising:

removing compressed air from the compressor;

cooling the removed air;

feeding the cooled removed air through thermally loaded components of the combustor and/or the turbine inside an internal cooling channel;

cooling the air after it has passed the thermally loaded components;

compressing and adding the air to the compressor end air;

wherein, in the manner of a targeted leakage, a small portion of the removed air is fed for film cooling into the turbine stream through drilled cooling openings provided on the components; and

removing more heat from the air in the cooling steps than is transferred into the air while flowing through the thermally loaded components to an extent as to lower the temperature of the compressor end air below that without adding the removed air.

33. (New) An apparatus for cooling a gas turbine system comprising: a compressor that takes in suction air on the inlet side and compresses it to

compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, whereby, in order to cool thermally loaded components of the combustor and/or the turbine, first cooling lines from the compressor and/or the outlet of the compressor to components and second cooling lines from the components back to the compressor and/or the outlet of the compressor are provided, wherein a cooler is located in the second cooling lines and wherein the components to be cooled are provided with drilled film cooling openings that communicate with the first and second cooling lines, wherein means for cooling the cooling air are located in the first cooling lines.

34. (New) A method for cooling a gas turbine system comprising a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, the method comprising:

removing compressed air from the compressor;

cooling the removed air;

feeding the cooled removed air through thermally loaded components of the combustor and/or the turbine inside an internal cooling channel;

cooling the air after it has passed the thermally loaded components;

compressing and adding the air to the compressor end air;

wherein, in the manner of a targeted leakage, a small portion of the removed air is fed for film cooling into the turbine stream through film cooling openings.

35. (New) A method for cooling a gas turbine system comprising a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas, as well as a turbine in which the hot gas is expanded while providing work output, the method comprising:

removing compressed air from the compressor;

cooling the removed air;

feeding the cooled removed air through thermally loaded components of the combustor and/or the turbine inside an internal cooling channel;

cooling the air after it has passed the thermally loaded components;

compressing and adding the air to the compressor end air;

wherein, in the manner of a targeted leakage, a small portion of the removed air is fed for film cooling into the turbine stream through film cooling openings; and

removing more heat from the air in the cooling steps than is transferred into the air while flowing through the thermally loaded components to an extent as to lower the temperature of the compressor end air below that without adding the removed air.

36. (New) An apparatus for cooling a gas turbine system comprising: a compressor that takes in suction air on the inlet side and compresses it to compressor end air that is available on the outlet side, a combustor in which a fuel is burned by using the compressor end air while resulting in the formation of hot gas,

as well as a turbine in which the hot gas is expanded while providing work output, whereby, in order to cool thermally loaded components of the combustor and/or the turbine, first cooling lines from the compressor and/or the outlet of the compressor to components and second cooling lines from the components back to the compressor and/or the outlet of the compressor are provided, wherein a cooler is located in the second cooling lines and wherein the combustor and/or turbine are provided with film cooling openings that communicate with the first and second cooling lines, wherein means for cooling the cooling air are located in the first cooling lines.